

AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) In an ultrasound machine for generating an image responsive to moving structure of a subject, apparatus representing displacement of the moving structure comprising:

a front-end arranged to transmit ultrasound waves into the structure and to generate received signals in response to ultrasound waves backscattered from the structure over a selected time period;

a display arranged to display the image of the moving structure, wherein said display displays at least one pattern of indicia corresponding to sampled anatomical locations within the moving structure, wherein said at least one pattern of indicia comprises at least one set of tagging symbols;

a user interface enabling a user of the machine to overlay the image on the display with a first pattern of indicia corresponding to sampled anatomical locations within the moving structure; and

a processor responsive to the received signals to generate parameter signals representing displacement of the anatomical locations corresponding to the pattern of indicia during at least a portion of the selected time period and responsive to the parameter signals to generate a second pattern of indicia corresponding to the displacement of the anatomical locations and to overlay the second pattern of indicia on the image on the display.

2. (Original) The apparatus of claim 1 wherein the moving structure comprises cardiac tissue.

3. (Original) The apparatus of claim 1 wherein the displacement represents one of distance moved by the moving structure and deformation of the moving structure.
4. (Original) The apparatus of claim 1 wherein the image is displayed with a predetermined geometry and the first pattern of indicia comprises a set of lines in the predetermined geometry.
5. (Original) The apparatus of claim 4 wherein the set of lines comprises dashed lines.
6. (Original) The apparatus of claim 4 wherein the lines are equidistant apart.
7. (Original) The apparatus of claim 1 wherein the processor generates the parameter signals by summing a set of signal values representing mean velocities of the moving structure over at least a portion of the time period.
8. (Original) The apparatus of claim 1 wherein the time period comprises at least a portion of a cardiac cycle selectable by a user of the machine including at least one of systole, diastole, IVC, IVR, E-wave, and A-wave.
9. (Original) The apparatus of claim 8 wherein the portion of the cardiac cycle is selectable from at least one of a set of signal values and a timing event signal comprising

at least one of an ECG signal, a phonocardiogram signal, a pressure wave signal, a pulse wave signal, and a respiratory signal.

10. (Original) The apparatus of claim 1 wherein the image is one of a B-mode image, a combined B-mode/TVI image, a combined B-mode/SRI image, a TVI image, and an SRI image.

11. (Currently Amended) In an ultrasound machine for generating an image responsive to moving structure of a subject, a method of representing displacement of the moving structure comprising:

transmitting ultrasound waves into the structure; generating received signals in response to ultrasound waves backscattered from the structure over a selected time period;

displaying the image of the moving structure in response to the received signals;

enabling a user of the machine to overlay the image on the display with a first pattern of indicia corresponding to sampled anatomical locations within the moving structure;

overlying said image with at least one pattern of indicia corresponding to sampled anatomical locations within the moving structure;

generating parameter signals representing displacement of the anatomical locations corresponding to the pattern of indicia during at least a portion of the selected time period in response to the received signals; and

generating a second pattern of indicia corresponding to the displacement of the anatomical locations in response to the parameter signals and displaying the second pattern of indicia overlaid on the image, wherein said first and second patterns of indicia comprise first and second sets of tagging symbols.

12. (Original) The method of claim 11 wherein the moving structure comprises cardiac tissue.

13. (Original) The method of claim 11 wherein the displacement represents the distance moved by the moving structure and deformation of the moving structure.

14. (Original) The method of claim 11 wherein the image is displayed with a predetermined geometry and the first pattern of indicia comprises a set of lines in the predetermined geometry.

15. (Original) The method of claim 14 wherein the set of lines comprises dashed lines.

16. (Original) The method of claim 14 wherein the lines are equidistant apart.

17. (Original) The method of claim 11 wherein said generating the parameter signals comprises summing a set of signal values representing mean velocities of the moving structure over at least a portion of the time period.

18. (Original) The method of claim 11 wherein the time period comprises at least a portion of a cardiac cycle selectable by a user of the machine.

19. (Original) The method of claim 18 wherein the portion of the cardiac cycle is selectable from at least one of a set of signal values and a timing event signal comprising at least one of an ECG signal, a phonocardiogram signal, a pressure wave signal, a pulse wave signal, and a respiratory signal.

20. (Original) The method of claim 11 wherein the image is one of a B-mode image, a combined B-mode/TVI image, a combined B-mode/SRI image, a TVI image, and an SRI image.

21. (Currently Amended) A method for visualizing a displacement of tissue, said method comprising:

overlaying, based on user input, a displayed image of a tissue with a first pattern of indicia corresponding to sampled anatomical locations of said tissue and a plurality of patterns of indicia corresponding to displacement of said anatomical locations during a selected time interval; and

generating a set of parameter signals representing displacement of said anatomical locations corresponding to said first pattern of indicia, wherein said patterns of indicia comprise sets of tagging symbols.

22. (Previously Presented) The method of claim 21, wherein said indicia provide real time visualization of said displacement.